

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number
WO 2005/044911 A1

(51) International Patent Classification⁷: C08L 23/10

(21) International Application Number:
PCT/IB2004/003584

(22) International Filing Date:
3 November 2004 (03.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/518,449 6 November 2003 (06.11.2003) US

(71) Applicant (for all designated States except US): BASELL POLIOLEFINE ITALIA S.p.A. [IT/IT]; Via Pergolesi 25, I-20124 Milano (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BERTA, Dominic, A. [US/US]; 210 E. Cobblefield Court, Newark, DE 19713 (US). PELLEGATTI, Giampaolo [IT/IT]; Via Ca Nove 4, I-44032 Baura (IT).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

A1

(54) Title: POLYPROPYLENE COMPOSITION

(57) Abstract: A propylene polymer composition comprising the following components: a) from 50% to 90% by weight of a propylene homopolymer or a propylene copolymer containing up to 5% by mol of derived units of C2-C20 alpha-olefins, having the following features: (i) a polydispersity index PI>3; (ii) melt flow rate (MFR), as measured at 230°C under a load of 2.16 kg, MFR>1 dL/min; and (iii) fraction soluble in xylene at 25°C (XSR)>1%; b) from 5% to 25% by weight a copolymer of ethylene and one or more derived units of C4-C20 alpha-olefins having the following features: (i) content of ethylene derived units higher than 50% by mol and lower than 92% by mol; (ii) intrinsic viscosity (η_{IV}) higher than 1.2 dL/g and lower than 6 dL/g; (iii) density ranging from 0.850 to 0.890 g/cm³; and (iv) a crystallinity content, expressed as the enthalpy of fusion, lower than 62 J/g c) from 5% to 25% by weight of a copolymer of propylene and ethylene having the following features: (i) content of propylene derived units higher than 50% by mol and lower than 92% by mol; (ii) intrinsic viscosity (η_{IV}) higher than 2 dL/g and lower than 6 dL/g; (iii) density ranging from 0.850 to 0.890 g/cm³; (iv) the value of the product of reactivity ratios $r_{12}r_{21}$ lower than 2; and (v) a crystallinity content, expressed as the enthalpy of fusion, lower than 45 J/g wherein the weight ratio between the ethylene copolymer (component b) and the sum of component b) and component c) is equal to or higher than 0.5 and less than or equal to 0.9.

WO 2005/044911

Best Available Copy